AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application. Additions are shown as <u>underlined</u> and deletions are shown as <u>struck through</u> or in [[double brackets]].

1. (Currently amended) A <u>composition empound</u>, comprising one or more chromium atoms bonded to one or more unsaturated fatty acid residues, wherein the unsaturated fatty acid residue is not derived solely from oleic acid, and wherein the unsaturated fatty acid residue is derived from a compound comprising the formula:

$$CH_3$$
— CH_2 — $CH=CH$ — R^1 — C — OH

wherein R¹ is a C₃-C₄₀ alkyl or alkenyl group comprising at least one double bond.

- 2. (Currently amended) The <u>composition compound</u> of claim 1, wherein the unsaturated fatty acid residue is derived from fish oil.
- 3. (Currently amended) The <u>composition compound</u> of claim 1, wherein the unsaturated fatty acid residue comprises at least 20 carbon atoms.
- 4. (Currently amended) The <u>composition</u> compound of claim 1, wherein the unsaturated fatty acid residue comprises at least one pair of methylene interrupted unsaturated bonds.
- 5. (Currently amended) The <u>composition compound</u> of claim 1, wherein the unsaturated fatty acid residue is derived from an omega-3 fatty acid.
- 6. (Canceled)
- 7. (Currently amended) The <u>composition compound</u> of <u>claim 6</u> <u>claim 1</u>, wherein R¹ has from 2 to 6 double bonds.

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8. (Canceled)

9. (Currently amended) The <u>composition empound</u> of claim 1, wherein the unsaturated fatty acid residue is derived from eicosapentaenoic acid 20:5ω3 (EPA), docosahexaenoic acid 22:6ω3 (DHA), docosapentaenoic acid 22:5ω3 (DPA), or any mixture thereof.

- 10. (Currently amended) The <u>composition</u> compound of claim 1, wherein the number of chromium atoms is from 1 to 3.
- 11. (Currently amended) The <u>composition</u> compound of claim 1, wherein the number of chromium atoms is 3.
- 12. (Currently amended) The <u>composition empound</u> of claim 1, further comprising one or more water molecules bonded to the chromium atom.
- 13. (Currently amended) The <u>composition compound</u> of claim 1, further comprising a non-chromium atom bonded to one or more unsaturated fatty acid residues, wherein the non-chromium atom comprises a metal, transition metal, alkaline metal, an alkaline earth metal, rare earth metal, or metalloid.
- 14. (Currently amended) The <u>composition compound</u> of claim 13, wherein the non-chromium <u>compound</u> atom is Zn, Mn, W, Mo, V, Nb Ta, Ga, La, Sb.
- 15. (Canceled)
- 16. (Currently amended) A compound comprising three chromium atoms and an unsaturated fatty acid residue having The compound of claim 1, wherein the compound comprises the formula:

$$[Cr_3(H_2O)_3(\mu\text{-}O_2C\text{---}R^1\text{---}CH\text{---}CH_2\text{---}CH_3)_6(\mu_3\text{-}O)]^+$$
 wherein R^1 is a $C_3\text{--}C_{40}$ alkenyl group comprising at least one double bond.

17. (Original) The compound of claim 16, wherein R¹ has from 2 to 6 double bonds.

18. (Canceled)

- 19. (Currently amended) The compound of elaim 15 claim 16, wherein the unsaturated fatty acid residue is derived from eicosapentaenoic acid 20:5ω3 (EPA), docosahexaenoic acid 22:6ω3 (DHA), docosapentaenoic acid 22:5ω3 (DPA), or any mixture thereof.
- 20. (Currently amended) The <u>composition</u> <u>compound</u> of claim 1, wherein the chromium is chromium(III).
- 21. (Canceled)
- 22. (Canceled)
- 23. (Canceled)
- 24. (Currently amended) The <u>composition</u> compound of claim 1, wherein the compound is a liquid.
- 25. (Currently amended) A method for preparing a compound composition, comprising reacting a chromium compound and one or more unsaturated fatty acids or the salt or ester thereof, wherein the unsaturated fatty acid or the salt or ester thereof is not solely oleic acid, and wherein the unsaturated fatty acid residue is derived from a compound comprising the formula:

$$CH_3$$
— CH_2 — CH = CH — R 1 \parallel C — OH

wherein R^1 is a C_3 - C_{40} alkyl or alkenyl group comprising at least one double bond.

26. (Original) The method of claim 25, wherein the chromium compound is in the form of a hydrate.

- 27. (Original) The method of claim 25, wherein the chromium compound is a chromium(III) compound.
- 28. (Original) The method of claim 25, wherein the chromium(III) compound is CrCl₃ or a hydrate thereof.
- 29. (Original) The method of claim 25, wherein the chromium(III) compound is Cr(OH)₃ or a hydrate thereof.
- 30. (Original) The method of claim 25, wherein the chromium compound is a chromium(II) compound.
- 31. (Original) The method of claim 30, wherein the chromium(II) compound is CrCl₂, or a hydrate thereof.
- 32. (Original) The method of claim 25, wherein the chromium compound comprises $Cr(SO_4)_2$, $CrCl_2.4H_2O$, CrS, CrO, $CrBr_3.6H_2O$, CrF_3 , $CrF_3.4H_2O$, $CrCl_3$, $KCr(SO_4)_2.12H_2O$, $Cr_2(SO_4)_3.xH_2O$, Cr_2S_3 , $[Cr(H_2O)_4Cl_2]Cl.2H_2O$, $Cr(H_2O)_6Cl_3$, Cr_2O_3 , $Cr_2O_3.xH_2O$, $CrPO_4.4H_2O$, where x is an integer from 1 to 28, or any mixture thereof.
- 33. (Original) The method of claim 25, wherein the reacting step is performed in one or more aqueous solvents.
- 34. (Original) The method of claim 25, wherein the reacting step does not involve a reducing agent.
- 35. (Original) The method of claim 25, wherein the reacting step is performed at an elevated temperature.

- 36. (Original) The method of claim 25, wherein the unsaturated fatty acid is derived from fish oil.
- 37. (Original) The method of claim 25, wherein the unsaturated fatty acid comprises at least 20 carbon atoms.
- 38. (Original) The method of claim 25, wherein the unsaturated fatty acid comprises at least one pair of methylene interrupted unsaturated bonds.
- 39. (Original) The method of claim 25, wherein the unsaturated fatty acid is an omega-3 fatty acid.
- 40. (Canceled)
- 41. (Currently amended) The method of elaim 40 claim 25, wherein R¹ has from 2 to 6 double bonds.
- 42. (Canceled)
- 43. (Original) The method of claim 25, wherein the unsaturated fatty acid comprises eicosapentaenoic acid 20:5ω3 (EPA), docosahexaenoic acid 22:6ω3 (DHA), docosapentaenoic acid 22:5ω3 (DPA), or any mixture thereof.
- 44. (Original) The method of claim 25, further comprising reacting the unsaturated fatty acid with a non-chromium compound, wherein the non-chromium compound comprises a metal, transition metal, an alkaline metal, alkaline earth metal, rare earth metal, or metalloid.
- 45. (Original) The method of claim 44, wherein the non-chromium compound is Zn, Mn, W, Mo, V, Nb Ta, Ga, La, or Sb.

46. (Canceled)

47. (Currently amended) A nutritional supplement comprising a chromium compound comprising one or more chromium atoms bonded to one or more fatty acid residues.

wherein the unsaturated fatty acid or the salt or ester thereof is not solely oleic acid, and wherein the unsaturated fatty acid residue is derived from a compound comprising the formula:

$$CH_3$$
— CH_2 — CH = CH — R^1 — C^1 — CH

wherein R¹ is a C₃-C₄₀ alkyl or alkenyl group comprising at least one double bond.

- 48. (Canceled)
- 49. (Original) The nutritional supplement of claim 47, comprising from about 10 to about 3000 micrograms of chromium.
- 50. (Original) The nutritional supplement of claim 47, comprising from about 50 to about 200 micrograms of chromium.
- 51. (Original) The nutritional supplement of claim 47, wherein the supplement is in the form of a tablet, gel-cap, capsule, liquid, or syrup.
- 52. (Currently amended) A delivery device comprising a chromium compound comprising one or more chromium atoms bonded to one or more fatty acid residues, wherein the unsaturated fatty acid or the salt or ester thereof is not solely oleic acid, and wherein the unsaturated fatty acid residue is derived from a compound comprising the formula:

$$CH_3$$
— CH_2 — CH = CH — R 1 \parallel C — OH

wherein R¹ is a C₃-C₄₀ alkyl or alkenyl group comprising at least one double bond.

- 53. (Original) The delivery device of claim 52, wherein the device comprises a microcapsule, a microsphere, a nanosphere or nanoparticle, a liposome, a noisome, a nanoerythrosome, a solid-liquid nanoparticle, a leuprolide, a gel, a gel capsule, a tablet, a lotion, a cream, a spray, an emulsion, or a powder.
- 54. (Previously presented) The delivery device of claim 52, wherein the device comprises a microcapsule, wherein the microcapsule comprises an agglomeration of primary microcapsules, each individual primary microcapsule having a primary shell and the agglomeration being encapsulated by an outer shell, wherein a chromium compound comprising one or more chromium atoms bonded to one or more fatty acid residues is encapsulated in the primary microcapsule.
- 55. (Original) The delivery device of claim 54, wherein the primary shell and the outer shell comprises gelatin type A, gelatin type B, polyphosphate, gum arabic, alginate, chitosan, carrageenan, pectin, starch, modified starch, alfa-lactalbumin, beta-lactoglobumin, ovalbumin, polysorbiton, maltodextrins, cyclodextrins, cellulose, methyl cellulose, ethyl cellulose, hydropropylmethylcellulose, carboxymethylcellulose, milk protein, whey protein, soy protein, canola protein, albumin, chitin, polylactide, poly-lactide-coglycolide, polylysine, kosher gelatin, non-kosher gelatin, Halal gelatin, non-Halal gelatin, or a mixture thereof.
- 56. (Original) The delivery device of claim 54, wherein the primary shell and the outer shell comprises gelatine type A having a Bloom strength of from 0 to 350.
- 57. (Original) The delivery device of claim 54, wherein the primary shell and the outer shell comprises a zero bloom fish gelatin.
- 58. (Original) The delivery device of claim 54, further comprising an additional shell surrounding the outer shell, wherein at least one of the primary, outer, and additional shells comprise a complex coacervate.

59. (Canceled)

60. (Canceled)

61. (Canceled)

62. (Canceled)

63. (Canceled)

64. (Currently amended) A method improving insulin sensitivity in a subject, comprising the step of administering an effective amount of a chromium compound comprising one or more chromium atoms bonded to one or more fatty acid residues, a nutritional supplement comprising the chromium compound, a delivery device comprising the chromium compound, or a foodstuff comprising the chromium compound to the subject; wherein the unsaturated fatty acid residue is derived from a compound comprising the formula:

$$CH_3$$
— CH_2 — $CH=CH$ — R^1 — C — OH

wherein R^1 is a C_3 - C_{40} alkyl or alkenyl group comprising at least one double bond.

65. (Currently amended) A method of reducing hyperglycemia in a subject, comprising the step of administering an effective amount of a chromium compound comprising one or more chromium atoms bonded to one or more fatty acid residues, a nutritional supplement comprising the chromium compound, a delivery device comprising the chromium compound, or a foodstuff comprising the chromium compound to the subject; wherein the unsaturated fatty acid residue is derived from a compound comprising the formula:

$$CH_3$$
— CH_2 — CH = CH — R^1 — C — OH

wherein R¹ is a C₃-C₄₀ alkyl or alkenyl group comprising at least one double bond.

- 66. (Canceled)
- 67. (Canceled)
- 68. (Canceled)
- 69. (Currently amended) A method of treating or preventing diabetes in a subject, comprising the step of administering an effective amount of a chromium compound comprising one or more chromium atoms bonded to one or more fatty acid residues, a nutritional supplement comprising the chromium compound, a delivery device comprising the chromium compound to the subject; wherein the unsaturated fatty acid residue is derived from a compound comprising the formula:

$$CH_3$$
— CH_2 — $CH=CH$ — R^1 — C — OH

wherein R^1 is a C_3 - C_{40} alkyl or alkenyl group comprising at least one double bond.

- 70. (Original) The method of claim 69, wherein the treating diabetes comprises reducing the blood glucose level in the subject.
- 71. (Canceled)
- 72. (Currently amended) A pharmaceutical formulation comprising a chromium compound comprising one or more chromium atoms bonded to one or more fatty acid residues and a pharmaceutically acceptable carrier; wherein the unsaturated fatty acid residue is derived from a compound comprising the formula:

$$CH_3$$
— CH_2 — CH = CH — R^1 — C^1 — CH

wherein R^1 is a C_3 - C_{40} alkyl or alkenyl group comprising at least one double bond.

73-79. (Canceled)